What is claimed is:

1. A phase shifter comprising:

a substrate;

a tunable dielectric film having a dielectric constant between 70 to 600, a tuning range of 20 to 60 %, and a loss tangent between 0.008 to 0.03 at K and Ka bands, the tunable dielectric film being positioned on a surface of the substrate;

a coplanar waveguide positioned on a surface of the tunable dielectric film opposite the substrate;

an input for coupling a radio frequency signal to the coplanar waveguide;

an output for receiving the radio frequency signal from the coplanar waveguide;

a connection for applying a control voltage to the tunable dielectric film, wherein the connection for applying the control voltage to the tunable dielectric film comprises:

a conductive strip;

a first electrode position adjacent a first side of said conductive strip to form a first gap between the first electrode and the conductive strip; and

a second electrode position adjacent a second side of said conductive strip to form a second gap between the second electrode and the conductive strip; and

a conductive dome electrically connected between the first and second electrodes.

2. The phase shifter according to claim 1, wherein the high dielectric constant voltage tunable dielectric film comprises a barium strontium titanate composite.

3. The phase shifter according to claim 1, further comprising:

a first impedance matching section of said coplanar waveguide coupled to said input; and

a second impedance matching section of said coplanar waveguide coupled to said output.

4. The phase shifter according to claim 3, wherein the first impedance matching section comprises a first tapered coplanar waveguide section; and

wherein the second impedance matching section comprises a second tapered coplanar waveguide section.

5. The phase shifter according to claim 1, further comprising:

a third electrode position adjacent a first side of said first electrode opposite said conductive strip to form a third gap between the first electrode and the third electrode; and

a fourth electrode position adjacent a first side of said second electrode opposite said conductive strip to form a fourth gap between the second electrode and the fourth electrode.

6. The phase shifter according to claim 1, wherein the substrate comprises one of:

MgO, $LaAlO_3$, sapphire, $A1_20_3$, and a ceramic.

7. The phase shifter according to claim 1, wherein the substrate has a dielectric constant of less than 25.

8. The phase shifter according to claim 1, wherein the tunable dielectric film has a dielectric constant of greater than 300.

9. The phase shifter according to claim 1, further comprising:

a conductive housing covering the phase shifter.

10. The phase shifter according to claim 1, wherein the tunable dielectric film comprises one of the group of:

barium strontium titanate ($Ba_xSr_{1-x}TiO_3$, BSTO, where x is less than 1), BSTO-MgO, BSTO-$MgAl_2O_4$, BSTO-$CaTiO_3$, BSTO-$MgTiO_3$, BSTO-$MgSrZrTiO_6$, and combinations thereof.

11. A reflective termination coplanar waveguide phase shifter comprising:

a substrate;

a tunable dielectric film positioned on a surface of the substrate;

first and second open ended coplanar waveguide lines positioned on a surface of the tunable dielectric film opposite the substrate;

microstrip line positioned on the substrate for coupling a radio frequency signal to and from the first and second coplanar waveguide lines; and

a connection for applying a control voltage to the tunable dielectric film.

12. The reflective termination coplanar waveguide phase shifter according to claim 11, further comprising:

microstrip divider coupling said microstrip line to said first and second coplanar waveguide lines.

13. The reflective termination coplanar waveguide phase shifter according to claim 11, wherein said first and second coplanar waveguide lines have different impedances.